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RIVER BASIN DEVELOPMENT IN AFRICA

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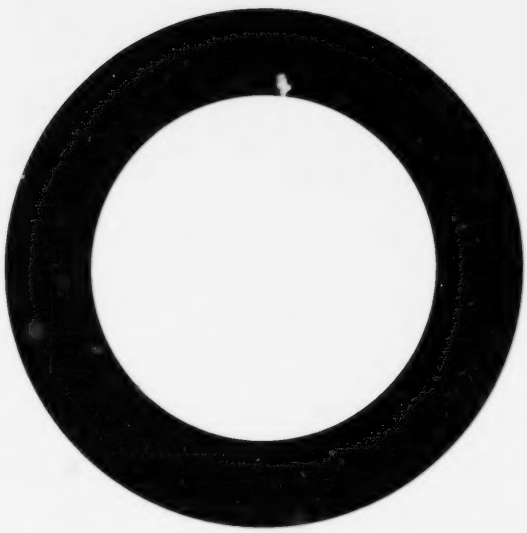

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LIST OF ACRONYMS

(in order of appearance in the text)

UNDP	-	United Nation Development Programme
TVA	-	Tennessee Valley Authority
OMVS	-	Senegal River Development Organization
OMVG	-	Gambia River Development Organization
FAO	-	Food and Agriculture Organization of the United Nations
USAID	-	United States Agency for International Development
UNDTCD	-	United Nations Department of Technical Co-operation for Development
RNC	-	River Niger Commission
NBA	-	Niger Basin Authority
FAC	-	Fond d'Aide et Cooperation
OPEC	-	Organization of Petroleum Exporting Countries
EDF	-	European Development Fund
CIDA	-	Canadian International Development Agency
CILSS	-	Permanent Inter-State Committee for Drought Control in the Sahel
LCBC	-	Lake Chad Basin Commission
KBO	-	Organization for the Management and Development of the Kagera River Basin (Kagera Basin Organization)
ECCAS	-	Economic Community of Central African States
PTA	-	Preferential Trade Area
UNEP	-	United Nations Environment Programme
EMINWA	-	Environmentally sound Management of Inland Waters

INTRODUCTION

1. From the earliest times, water has been a critical factor in determining socio-economic conditions in human societies. In Africa, where over 75 per cent of the continent is deficient in rainfall at some time during the year, rivers and lakes were the focus of civilization, and the rational utilization of water resources became one of the key factors in progressing from subsistence to market economies.

2. Although river and lake basins form natural physical units which lend themselves to integrated economic development, the historical genesis of nation states with arbitrary political boundaries, and the sheer size of many of the major basins, means that there are now 54 international river or lake basins shared by two or more states and these cover nearly 40 per cent of the surface area of the continent.

3. As populations and economies have grown, the demands for water have steadily risen to support not only basic domestic requirements but also the growth of industry, energy, transportation and agriculture.

4. The recent economic crisis and the devastating drought over much of the continent have focussed attention on collective self reliance, regional and sub-regional co-operation and the integrated development of resources, as means of accelerating socio-economic development. The concept of using these natural physical units as a means of promoting more effective economic integration through multi-sectoral and complementary development activities has received renewed attention both in the preparations for the UNDP Fourth Cycle Regional Programme and in the African Priority Programme for Economic Recovery and its derivatives.[1/]

5. The concept is not new. Much of the earliest water resources legislation in the world is concerned with navigation rights to promote trade - a recognition of the usefulness of international rivers as a focus for commerce. Because rivers have provided convenient, if artificial, political boundaries, however, there is an equal volume of legislation referring to the demarcation of boundaries. This illustrates one of the basic dilemmas of international river and lake basin development, the problem of developing shared water resources for the mutual benefit of riparian states without infringing upon national sovereignty.

6. The first example of integrated river basin development comes from within a single country, the United States of America, where the Tennesse Valley Authority (TVA) was established in 1933 "with the view of encouraging and guiding in the orderly and balanced development of the diverse and rich resources...."[2/]

7. The TVA was able to demonstrate successfully that it did not supplant, but rather supplemented, the activities of other federal, state and local agencies, and in doing so opened new avenues for joint action.

8. In the developing world, the earliest and most successful example of river basin development comes from the Mekong River in south-east Asia. The Mekong Committee for Co-ordination and Investigation of the Lower Mekong Basin was established in 1957 and, "despite war, insurrection and insecurity" the Mekong project has obtained capital investments of over US $600 million which have resulted in substantial benefits in the fields of hydropower, irrigation, flood control, navigation and fisheries.3/

9. In Africa, the concept of international co-operation towards the integrated development of resources was essentially a post Colonial Era phenomenon. In the early 1960s, several international treaties were concluded relating to the Senegal Basin (26 July 1963), the Niger Basin (26 October 1963), the Chad Basin (22 May 1964) and the Gambia Basin (16 February 1965). More recently, the agreement creating the Kagera Basin Organization was signed on 24 August 1977.

10. The Mano River Union (Libera and Sierra Leone in 1973, Guinea joined in 1980) is more of an economic community than a development organ, although its activities have extended to a study of water resources and hydroelectric power of the Mano River Basin. Similarly, the Nigeria-Niger Commission for Co-operation (1971) and the Sene-Gambian Permanent Secretariat (1976) are bilateral, multipurpose organizations not primarily concerned with utilizing river basins as a vehicle for subregional economic integration.

11. The Liptako-Gourma Region Integrated Development Authority was created in 1970 for the development of the mineral, energy, hydraulic, agricultural, pastoral and fishing resources of part of the Niger Basin falling in Burkina Faso, Mali and Niger. Its activities overlap with those of the Niger Basin Authority but, in common with the above bilateral agencies, it does not deal with river basins as development entities.

12. At the Second Extraordinary Session of the Commission and Second Extraordinary Meeting of the Conference of Ministers of ECA in Addis Ababa from 12 to 16 October 1976, resolution ES-2/1 requested UNDP and ECA to continue their close co-operation in all activities concerning the preparation, formulation and implementation of the Fourth Regional Programming Cycle for Africa. Resolution ES-2/7 also requested UNDP to give technical and financial assistance to African regional and subregional organizations of economic integration.

13. Accordingly, joint ECA/UNDP missions were fielded in early 1977 to the economic integration entities and to the river and lake basin organizations to assist in the final preparation of project proposals for the Fourth Cycle.

These proposals are to be discussed in a meeting to be held in Addis Ababa from 27 to 29 April and will be forwarded subsequently to UNDP.

14. This report is a review of the current situation in the existing river and lake basin organizations. It also discusses recent developments towards the creation of new organizations in the Nile, Congo/Zaire and Zambezi basin. The aim of the report is not only to keep the Conference of Ministers of ECA informed of current developments but also to seek endorsement of the secretariat's full support for the concept of using the river and lake basin organizations as a major instrument for promoting socio-economic development activities in the region. In this respect, much closer co-operation between UNDP and ECA is envisaged in the future and the secretariat anticipates playing a major role in accelerating progress over the next few years.

I. PROGRESS WITHIN THE EXISTING ORGANIZATIONS

A. Senegal River Development Organization (OMVS)

15. The prececessors of the Senegal River Development Organization (OMVS) were the Inter-State Committee for the Development of the Senegal River, created in 1963, and the Organization of Senegal Riparian States (OERS), created in 1968, on the basis of agreements between four states - Guinea, Mali, Mauritania and Senegal.

16. In 1972, the Senegal River Development Organization was established through the co-operation of three states, Mali, Mauritania and Senegal, with more modest and realistic objectives than its predecessors, namely the promotion and co-ordination of studies and activities relating to the resources of the Senegal River Basin, including navigation, irrigation and hydropower generation.

17. The main task of OMVS has been to regulate the river to assure a flow of 300m^3 sec^{-1}. This is being achieved through the construction of a storage reservoir at Manantali in the upper reaches of the river, scheduled to be completed in 1988. This regulated flow will allow the irrigation of 375,000 ha of land (of which 240,000 ha are in Senegal, 120,000 ha in Mauritania and 9,000 ha in Mali), the annual production of 800 GWh of hydroelectricity and permanent navigation between Kayes and Saint-Louis (905 km).

18. The other key component of OMVS activities has been the construction of an anti-salt barrage at Diama near the mouth of the river. The construction work on this barrage is completed and it will now prevent the movement of a saline intrusion upstream during the low-flow season and at the same time store water for the irrigation of 30,000 ha.

19. Associated with the navigation component, it is envisaged that a river port will be constructed at Kayes together with ten intermediate port installations downstream.

20. Through UNDP multilateral and bilateral assistance, OMVS has been able to carry out an array of sectoral studies to evaluate the potential of the basin and to obtain financial support of US $21,000 towards the construction of the two dams. UNDP assistance during the Third Cycle amounted to US 2,469,000 for Institutional Support to OMVS (RAF/81/059 executed by UNDTCD), and US $65,000 for Agricultural Development (RAF/78/030 executed by FAO).

21. During the construction of the two dams, the OMVS has been able to reduce costs by approximately US 100 million. The organization is now engaged in discussions with the donors to utilize these funds. At the present time, only the Italian Government is disposed to utilize part of the remaining funds for the hydroelectric power station at Manantali. Most of the other donors would like to accord agriculture the highest priority. On their part, the Heads of State of OMVS have decided to give priority to navigation and to undertake a campaign of alerting the donor countries to this effect.

22. It can be seen that the OMVS is poised at a critical phase of trying to ensure the viability of the investment in the two dams through the promotion of economic activities in the spheres of hydropower, irrigation and navigation. In this respect, it is the most advanced of the international river and lake basin organizations in Africa both in stage of development and in institutional organization. This strength is reflected in political support for the organization from its member States and in financial assistance from the donor community.

23. Under these circumstances, potential UNDP support during the Fourth Cycle is envisaged as assisting OMVS in its negotiations with donors to launch pre-investment studies and projects within the three major spheres, assisting with additional agricultural studies and assisting with the macro-economic studies to determine the strategies for development in the four sectors:

(i) agriculture, forestry, livestock and fisheries;
(ii) industry, minerals and energy;
(iii) transport and communications; and
(iv) health and the protection of the environment.

24. Although the achievements of OMVS are impressive in comparison with the other river and lake basin organizations, this should not obscure the severe difficulties it faces in realising the profitability of its major works under the prevailing world economic situation. In many ways it serves as a model for the other African river basin organizations. Its success or failure in securing a return on the investment, however, will have a major impact on the attitude of many donors towards the concept of supporting international river and lake basin development as a key element in promoting socio-economic development.

5. Gambia River Basin Organization (OMVG)

25. The first efforts at joint development of the Gambia River Basin began in 1964 with the establishment of a Joint Commission between Gambia and Senegal, assisted by FAO. In 1965, a convention on integrated basin development was signed which led to a Treaty of Association in 1967. The first work programme was undertaken with the assistance of UNDP (RAF/66/) under the auspices of the Sene-Gambia Inter State Ministerial Committee. This project was concerned mainly with hydrological and topographical studies to assess the water resources potential of the basin.

26. The positive results from these first studies and the complex problems of co-ordination, revealed the need for a permanent structure to oversee the implementation of decisions of the Council of Ministers and to follow-up the work programme. Accordingly, a Co-ordinating Committee for the Gambia River Basin Project was established in 1976. This committee requested UNDP to organize a multidisciplinary multidonor mission to assist in the preparation of a development programme for promoting food self sufficiency, an increase in income of the rural population and industrial development.

27. As a result of this mission's findings, it was found necessary to establish a permanent institution to provide a framework for developing the basin and to implement the priority programme of basic studies and infrastructural strengthening. The Gambia River Basin Development Organization (OMVG) was created in 1978. The Republic of Guinea joined the organization in 1980 and the Republic of Guinea-Bissau in 1982.

28. In 1980, a five-year programme of action was prepared by the OMVG with the help of UNDP and FAO which called for an investment of US$1000 million. The cost of the action programme was revised upwards after Guinea joined the organization to US$2257 million.

29. As with the Senegal River, the Gambia River action programme concentrates on an anti-salt barrage (first at Yallintenda and now at Balingho) and a storage reservoir at Sambangalou, with associated elements of hydropower, irrigated agriculture and transport. In addition, the development of the Gambia basin, as accepted by member states, includes a further storage dam at Kouya in Guinea, a study of the potential for developing the Koliba-Corubal and Kayanga-Geba basins in Guinea-Bissau, the initiation of a "post dam" programme to expand irrigated agriculture and the necessary measures to mitigate adverse environmental and socio-economic effects of the action programme.

30. Up until the present time, OMVG has benefited from external assistance for pre-investment studies totalling US$27 million. During the 1982-1986 programming cycle, UNDP assistance amounted to US$ 1,450,000 for Institutional Support to OMVG (RAF/82/002 executed by UNDTCD) and US$ 500,000 for Pedological Studies (RAF/82/047 executed by FAO). Total UNDP support to OMVG is in the order of US$ 4.61 million or 16 per cent of the total

31. The organization also finds itself poised at a critical point in its history not only in seeking to ensure the profitability of major construction works, in common with OMVS, but chiefly because a controversy has arisen over the choice and sequence of hydraulic works to be executed and over the ecological and sociological consequences of construction, particularly Balingho. The economic viability of the anti-salt barrage at Balingho has been questioned, but on grounds which are themselves disputable.

32. For this reason, the priority activities to be undertaken as a matter of urgency comprise a number of elements designed to resolve the controversy and to remove the constraints holding back the construction phase. They will also prepare for the "post-dam" phase by maximising the gross domestic production resulting from harnessing the river and by preparing the rural population for the new activities, such as irrigated agriculture, fisheries and small-scale livestock rearing, and to a certain extent the social changes which will ensue.

33. In summary, it can be seen that the OMVG is still in the pre-investment stage. The feasibility studies of the hydraulic works envisaged are sufficiently advanced to allow part of the necessary investment to be sought. The programme requires a capital investment in the order of US $200 million, together with complementary and pre-investment studies totalling another US$6 million.

34. Benefitting from the experience of the OMVS, the Gambia River Development Organization is justifiably concerned about the "post-dam" phase. It is determined not only to prove that harnessing the river will lead to socio-economic progress but also to show that the member States will be in a position, as a consequence of the river basin development, to service the debts inherent in any investments agreed to by the donors.

C. The Niger Basin Authority (NBA)

35. The agreement creating the River Niger Commission (RNC) was signed in November 1964 by the Heads of State of the nine countries sharing the water resources of the Niger Basin: Benin, Burkina Faso, Cameroon, Chad, Cote d'Ivoire, Guinea, Mali, Niger and Nigeria. The objectives of this organization were modest initially, primarily concerned with navigation and transport on the river.

36. For the first nine years of its life, the River Niger Commission was confined to a non-executive role; namely, undertaking studies, the collection of data and the dissemination of information. Member States did not take the work of the Commission seriously and were often not represented at meetings.4/

37. In 1973, the agreement was amended, a Council of Ministers with full powers replaced the Commissioners and the Administrative Secretary was designated Executive Secretary to reflect the new view member States took of the organization. This fresh start, however, was insufficient to overcome the institutional, financial and technical weaknesses plaguing the organization and the Niger River Commission was unable to assume an executive role.

38. In 1979, the Heads of State and Government held an extraordinary mission in Lagos, resolving to rehabilitate the Commission and to transform it into a serious and meaningful organ. Finally, on 21 November 1980, the Convention Establishing the Niger Basin Authority was signed, and the new body came into being with an express mandate that the activities of the Authority should centre on the harmonization of national development policies within the basin through the implementation of integrated development programmes.

39. At the same time, a "Prospective development plan for the Niger Basin" was prepared and from this basic document a two-year action plan was synthesized. During a pledging conference at Conakry in 1981, 39 per cent of the required budget of US$56 million was procured. Subsequently, NBA received assistance from USAID (US$13 million), FAC, OPEC, FED, FAO, CIDA and UNDP for the establishment of a planning unit, an interstate project centred around a multi-purpose hydraulic scheme, design of an electrical grid for West Africa, evaluation of the rural water resources of the basin, a sedimentation model and the planning of agricultural development.

40. Two very successful projects are also located in Niamey but have weak links with NBA. The first is the Hydroniger Project, initiated in 1970 before the creation of NBA, which was later incorporated but not fully integrated within the Authority. Hydroniger is concerned with hydrological monitoring and forecasting using real time data transmitted by satellite. There is no doubt that this project has substantially achieved its objectives and is largely operational.

41. The second is the Agrymet Project, a specialized institution of CILSS created in 1974 for the purpose of training and research into hydrometeorology and agrometeorology.

42. It is a reflection of NBA's lack of credibility that these two successful organizations separate themselves as much as possible from NBA even though there is a great deal that could be achieved in common.

43. The present situation is that the Authority is still being severely hampered by the same managerial and financial difficulties that crippled its predecessor. In spite of some achievements, the lack of a focussed development programme has not inspired the confidence of member States in the organization and the payment of contributions is still behind schedule.

44. In August 1986, the Council of Ministers commissioned a consultant's report on revitalising the Authority. On the basis of that report, the Council of Ministers made recommendations on rationalizing the contributions of member States, streamlining the objectives of the NBA and restructuring the secretariat. The Executive Secretary has been entrusted with the preparation of a summit meeting of Heads of State and Government to decide upon the future of the Authority. In the meantime, the personnel of the secretariat have been suspended from duty and, apart from the Hydroniger Project, activities have ceased.

45. It seems likely that the summit will be held in late 1987. If the organization is going to continue, there will have to be a substantial slimming down of its structure, a concentration on basin planning, the identification of programmes with clear benefits to member States and an assurance of financial contributions to keep the organization operational. The Hydroniger Project should be continued to fulfil its objectives and the substantial capabilities of this project can be used to good effect by the planning unit.

46. Only in this way will the confidence of donors be restored and the Authority make some headway towards fulfilling the executive and operational role envisaged by member States. Given the critical nature of the Niger Basin in terms of economic development of Sahelian West Africa, the existing political will among member States to co-operate should be capitalized upon and every effort should be made to revitalize the organization.

D. Lake Chad Basin Commission (LCBC)

47. The convention creating the Lake Chad Basin Commission was signed on 22 May 1964. Initially, its objectives were to prevent harmful exploitation of Lake Chad and the rivers running into it and, consequently, for the first eight years of its life the Commission devoted itself to carrying out studies and research.

48. It was not until 1972 that the Heads of State and Government of the four riparian states of the conventional basin (Cameroon, Chad, Niger and Nigeria) met for the first time and the emphasis was shifted towards the economic and social growth of the area. Following this, the Lake Chad Basin Commission Development Fund was established in 1973 to finance development projects, and member States were called upon to contribute 1/10th of their respective national budgets to this fund.

49. Since 1972, the Commission has embarked upon projects and expanded its activities. UNDP alone contributed US$14.3 million towards increasing agricultural production and restoring the stocks of cattle decimated by the drought of the early 1970s. A multidonor, multidisciplinary mission was fielded in 1977 which prepared a US$93.5 million programme mostly centred around irrigated agriculture. These proposals were judged unacceptable on sociological grounds by some donors. Subsequently, a strategy for long-term rural development was prepared with assistance from USAID, Italy, Netherlands and UNDP, but aspects of this action plan were also controversial.

50. In 1981, a five-year action plan based on the findings of the previous studies was prepared and submitted to donors. It listed 19 projects, of which 10 were for immediate execution, aimed at maximizing food production and triggering socio-economic development. In 1982, the consultative committee members of LCBC put forward five options for implementing the action plan requiring financial investments ranging from US$4.6 to 35 million. The lower amount received support from the donors and was conceived as a bridging operation pending LCBC seeking additional financing.

51. The summit of Heads of State which took place in Lagos in April 1983 took the following decisions:-

- the return of the Commission from Laroua in Cameroon (to where it had been evacuated following the disturbances in Chad) to Ndjamena;

- the evaluation of the basin's water resources including those of the Logone and Chari rivers.

52. This marked an important attempt to revitalize the Commission and to orientate its activities around the essential, unifying, water resources element which can lead to socio-economic development.

53. Again at the summit meeting in 1985, the Commission was called upon to return to Ndjamena and to revise the 1981 programme of action. Up to this date, the LCBC had been gradually losing the confidence of the donor community as a result of mediocre performance, poor management, a disputed programme and a lack of effective communication among the Commission, its member States and the donors.5/

54. The Commission returned to Ndjamena in September 1986 under the leadership of a new Executive Secretary and began the work of restoring its ravaged headquarters. In the context of a new start for the Commission, several donors have expressed their interest, in principle, in continuing their support to the organization. On their part, the member States have agreed to step up their efforts to finance the organization in spite of the economic situation in the region. At present the development fund stands at 500 million CFA and the level of contribution to the fund by member States exceeds 75 per cent of assessed dues. In terms of running costs, 65 per cent of contributions are paid. It should also be mentioned that 170 million CFA have also been contributed towards the renovation of the headquarters building.

55. In summary, it can be said that despite the difficulties faced by the organization, concrete achievements have been made in the field of agricultural training, fisheries and livestock. The Commission has made a new start and attempted to focus its activities on the main objective of planning and regulating the water resources of the basin to restore the depleted volume of Lake Chad and to promote economic activity. Assistance is needed to strengthen its planning and water management capability, to stimulate the development of irrigation and fisheries, and to promote livestock development within the ecological constraints.

56. With regard to the management of the Logone and Chari river systems which are essential to the restoration of lake levels, the Central African Republic has been invited to join the commission in order to extend the limits of the conventional basin to include the headwaters of these rivers.

57. Given the importance of the water resources of this area as a focal point for socio-economic development and the political will of the member States to

support the organization, there are strong grounds for assisting the revitalization of the organization now underway and for encouraging donor support for development activities in this drought-stricken portion of the continent.

The Kagera Basin Organization (KBO)

58. The Organization for the Management and Development of the Kagera River Basin was created on 24 August 1977 by the Heads of State of Burundi, Rwanda and Tanzania. This followed substantial UNDP assistance in the preparation of a plan for the optimal development of land and water resources of the Kagera River Basin, which included proposals for an institutional body for the joint management and development of the basin's resources. Uganda became a member of the KBO in May 1981.

59. An Indicative Basin Plan was formulated and presented to donors in Paris in 1979. There, it was generally agreed that the plan did not yet constitute a comprehensive development strategy for the Kagera Basin. Subsequently, a multidonor, multidisciplinary mission led by UNDP was fielded and an action programme was prepared which included six project proposals for agricultural development, two for hydropower, one for transport and communications and one concerning the environment.

60. The action programme required pre-investment finance of some US$35-50 million, with subsequent capital investment estimated at US$3 billion. Although a number of donors expressed interest in the programme, concrete pledges were received from only Austria and Italy who agreed to finance jointly a transport study. In the area of hydropower, the Belgian Government agreed to finance studies for the Rusumo Falls proposal. UNDP assistance during the Third Cycle amounted to US$550,000 for the Documentation Centre (RAF/80/029, executed by UNESCO) US$37,200 for Tsetse Fly Eradication (RAF/85/12, mission carried out by FAO/WHO/IAEA), and US$750,000 for a transport study (RAF/80/028) which was not fully utilized. Support prior to 1982 is estimated at US$3 million.

61. Following a review meeting between KBO and UNDP in 1984, a consultant's report was prepared on cost reduction and restructuring. The Commission of KBO unanimously accepted the proposals contained in the report and implemented the recommendations, resulting in a cost saving of 40 per cent in the 1985 budget compared with 1984. In September 1985, the secretariat was able to occupy its new headquarters and accelerate progress with the establishment of the documentation centre.

62. At the present time, the KBO is concerned with reducing its action programme to a more manageable size and seeking donor support for priority activities in the field of Agriculture, Energy, Transport, Communications and Training. The Belgian Government is actively financing the Rusumo Falls hydropower project, the African Development Fund has recently agreed to loan US$15 million for the financing of a telecommunications project and UNDP support during its Fourth Cycle Regional Programme is being sought to fund the

completion of the documentation centre, some supplementary elements of the Rusumo Falls project and a Tsetse Fly Eradication Project.

63. The KBO is thus poised for an important phase of implementation which should help in securing additional finance from the international community for the other outstanding priority programmes. In terms of member state support, a considerable effort has been made to reduce arrears in the recurrent budget. The organization has also taken steps to revise the proportion of total contributions paid by each member State. The new quotas are: Burundi 20 per cent, Rwanda 22 per cent, Tanzania 35 per cent and Uganda 23 per cent. It is to be noted that the member States have financed the cost of the head quarters building and three regional offices at a total cost of over US$4 million. It is anticipated that with the completion of these capital investments, a greater proportion of the contribution of member States will be available for development activities as provided for in the organization's financial regulations.

II. CURRENT DEVELOPMENTS TOWARDS INTEGRATED DEVELOPMENT OF OTHER INTERNATIONAL RIVER AND LAKE BASINS

A. The Nile Basin

64. Second only to the Congo/Zaire basin in size, the Nile Basin is 2.9 million km^2 in surface area, with a main stream, the White Nile, some 6,700 km from source to mouth. The river has two main sources, the Equatorial Lakes, from which the White Nile rises, and the Ethiopian Plateau, from which the Blue Nile, Sobat and Atbara system rise. It has an annual discharge at Aswan of about 84 million m^3.

65. The basin includes portions of nine riparian States (Burundi, Egypt, Ethiopia, Kenya, Rwanda, Sudan, Tanzania, Uganda and Zaire) and extends from the equatorial region to the Mediterranean. It also includes the Kagera River Basin.

66. The importance of water resources for the socio-economic development of basin is indisputed. Already they support substantial activities in the fields of agriculture, hydropower, transport, fisheries and livestock but, with growing demands, the comprehensive planning and management of the resources is becoming increasingly necessary.

67. Most of the riparian States have developed indicative plans for water resources utilization. Bilateral agreements exist between Egypt and Sudan on the utilization of the Nile waters, including the establishment of a permanent Joint Technical Committee. From 1967 to 1977, a UNDP-funded project enabled hydrometeorological surveys of the catchments of Lake Victoria, Kyoga and Mobuto Sese Seko to be undertaken, including a hydrological model of the Upper Nile Basin. This entailed the active co-operation of most riparian States, with Ethiopia and Zaire enjoying observer status in the technical committee.

68. In January 1980, UNDP sponsored a workshop for Nile Basin countries, organized by the Mekong Secretariat in Bangkok. At that meeting, a number of recommendations were made concerning co-operation among basin States for the comprehensive development of water resources. The representatives also requested UNDP to play a catalytic role in mobilizing assistance in support of Nile development.

69. As a result of that initiative, a joint UNDP/ECA mission was carried out in February/March 1987 to clarify issues with the governments concerned and to discuss the terms of reference of a subsequent identification mission for the development of the Nile. The purpose of the identification mission will be to identify programmes and projects which require joint action by two or more riparian States.

70. It is expected that the identification mission will take place in late 1987 and, following consideration of the report, the proposals will be discussed at an intergovernmental meeting in March 1988.

71. It may be noted that this initiative is purely development orientated. There are no prior legal or institutional requirements and only if there is a clear need for such, on the basis of subsequent projects and programmes, will these aspects be considered.

L. The Congo/Zaire basin

72. The Congo/Zaire basin is the largest in Africa covering an area of 3.7 million km². The main river is estimated to be 3,700 km in length and the catchment includes the Lakes Tanganyika/Kivu basin. The population of the basin is 30 million, representing 40.5 per cent of the populations of the nine riparian States (Angola, Burundi, Cameroon, Central African Republic, Congo, Rwanda, Tanzania, Zaire and Zambia.

73. Most of the basin has a high potential for rainfed agriculture because of its equatorial location, but the northern and southern margins have long dry seasons and have suffered from the recent drought. The high rainfall over much of the basin gives rise to a mean annual discharge of 1,325 billion m^3, which represents about 30 per cent of all surface water discharges on the continent.

74. There is a huge hydroelectric power generation potential within the basin and scope for economic co-operation in the fields of energy and industry. Much of the basin is land-locked, however, and transport and communications offer important incentives for joint programmes among the riparian States.

75. For this reason, a study was requested by three riparian States (Burundi, Rwanda and Zaire) and executed by ECA in 1983 which reviewed the current situation within the basin and analysed the possibilities for developing and exploiting the river and its tributaries. Proposals were made for a convention

to establish an authority to develop the basin, for a general policy and for a first programme for development.

76. The study will be examined by all riparian States and a meeting is scheduled to be held in October 1987 to decide on future action. It is likely that any programme of co operation will be carried out under the auspices of the Economic Community of Central African States (ECCAS) in the first instance. If this were to come about, the problems of the basin being shared by two member States of the Preferential Trade Area (PTA), i.e. Tanzania and Zambia, and the absence of Angola from ECCAS would have to be solved.

77. There is no reason, however, to prevent the identification and implementation of projects which involve two or more member States as a first priority, and the legislative and administrative aspects can be dealt with as and when they arrive, similar to the strategy proposed for the White Nile.

78. Prior proposals to develop the Lakes Tanganyika/Kivu Basin, including the establishment in 1975 of a now defunct technical committee, have been overtaken by the proposal to consider development of the Congo/Zaire Basin as a whole. Should the basin prove difficult to develop as a whole, the potential for transport, irrigation and fisheries could be explored with respect to the much smaller Tanganyika/Kivu Basin, together with the problem of regulating lake levels, if member States so wished.

C. The Zambezi Basin

79. The Zambezi River and its tributaries drain an area of approximately 1.3 million km^2. The mean annual flow at its mouth is 100 billion m^3 and about 20 million people inhabit the river basin. The resources are shared among eight countries, namely, Angola, Botswana, Malawi, Mozambique, Namibia, Tanzania, Zambia and Zimbabwe.

80. In the light of the Environmentally Sound Management of Inland Waters(EMINWA) Programme of UNEP, a working group of experts met in 1985 and proposed the drawing up of a diagnostic study and a draft international Zambezi Action Plan. The objectives of the study were to define specific environmental programmes and their impact, to draw up programmes for incorporating environmental concerns into the management of water resources and to alert governments to the potential impact of socio-economic development activities on the water environment.

81. The second meeting of the working group in 1986 suggested amendments to the action plan which were again discussed at the third meeting in Gaborone in January 1987. At the same meeting, an agreement on the action plan was also considered. This agreement calls for the adoption of the plan by member States, the establishment of an intergovernmental monitoring and co-ordinating committee, and the setting up of a co-ordinating unit to ensure the implementation of the plan and to act as a secretariat for the intergovernmental committee. It is also proposed that a Zambezi River Basin Trust Fund be established to promote financial support for the implementation of the Action Plan. The Trust Fund is to be financed from contributions made by member States and other external donor

sources. To this end, a meeting was held in Geneva in March 1987 to solicit support for the Trust Fund.

82. The agreement is to be considered at an intergovernmental meeting to be held later in 1987.

III. CONCLUSIONS AND RECOMMENDATIONS

83. This brief review of the "state of the art" of international river and lake basin development in Africa shows that, despite some success in executing the preliminary diagnostic phase, preparing action programmes and obtaining the necessary finance for specific projects, most organizations have faced severe difficulties as a result of financial, technical and managerial weaknesses, such remains to be done to improve the performance of the organizations if they are to accelerate socio-economic development in their particular subregions. The concept of using distinct geographical units as a vehicle for integrated development is even more valid at the present time of economic crisis, when the international community is waiting for concrete examples of successful collective self-reliance before providing the additional external funds needed for long-term development.

84. In the case of the existing basin organizations, the political will to co-operate is already demonstrated and the institutional and legislative machinery is already in place, but the political will is not backed up with the provision of adequate resources from the member States. Despite recent efforts to reduce the arrears owing to the organizations, all are over-dependent upon external donor support and management remains a major problem. Some urgent reforms are necessary in order to increase their effectiveness as development agencies and member States are urged to introduce the necessary restructuring and refocussing measures to provide a firm foundation for the future.

85. In the case of the basins in which new initiatives for co-operation are envisaged, there is clearly a need for caution in establishing new institutions before existing mechanisms have been fully explored, and in view of the proliferation of calls for contributions from already overburdened member States.

86. The following suggestions are made, in the light of experience so far, as to the major orientation of river and lake basin development. Obviously, individual circumstances and priorities differ, but it is hoped that these general points will assist member States in their consideration of the future programmes and activities of river and lake basin organizations.

87. These organizations are essential for promoting integrated development and agriculture, in particular. If, for a variety of reasons, little progress has been made over the last twenty-five years, this is all the more reason for a determined effort over the next four to five years to ensure their viability and the profitability of their programmes.

(1) As regards institutional arrangements, it is felt that development activities must take priority over institution building and legislation. Where mechanisms already exist, a streamlining of both the executive secretariats and the administrative machinery may reduce costs and still enable the organizations to function effectively. In the case of new initiatives, arrangements should be made as and when required by the programmes and projects actually being implemented.

(2) As regards policy, it seems clear that inter-state activities need the intervention of Heads of State and only at that level can decisions be taken. The Council of Ministers should oversee the implementation of action programmes, and technical discussions at the expert level should be on an ad hoc basis, largely designed to brief either the Ministers or Heads of State and to assist in decision making.

(3) As regards finance, most of the organizations are moving towards a differential scale of contribution according to either the ratio of benefits to be accrued from development activities or the member States' ability to contribute in terms of their per capita income or GNP. To request equal contributions from member States having little share in either the resources or potential benefits is a formula unlikely to succeed in the long run.

(4) Some organizations have established a development fund in addition to the usual capital and recurrent budgets. This allows them to have a certain independence from external sources of finance, enabling them to carry out project identification and preparation, and not tied in to certain donors' wishes. It also allows a cash contribution to projects, which can be helpful in receiving external finance.

(5) Bearing in mind that a diagnostic phase is necessary to identify the basin's potential for development and to stimulate the interest of riparian States, most subsequent action programmes are too ambitious and beyond the capabilities of the existing organizations. It is essential for member States to indicate priorities and for the organizations to produce realistic, phased programmes. A step-by-step approach is more likely to be successful and will lead to a steady growth in the capability of the organizations.

(6) The key function of the river and lake basin organizations is to plan such a phased programme and to harmonize it with the national programmes of member States. This requires that the planning units must be adequately staffed and be given high priority in the work programme. The implementation, monitoring and evaluation of development projects is an integral part of this function. Very often the execution of projects or programmes may be contracted out, but the organization must have the technical resources to oversee the work being carried out.

(7) The organization must also be able to follow through the project cycle and to perform an economic analysis of proposed projects. This will enable it to check the validity of conclusions reached by consultants and to verify points of dispute. Any economic analysis performed should take into account the unquantifiable and social benefits of development proposals, as far as it is possible.

(8) Adequate environmental and sociological impact studies should form part of all pre-investment work. This will avoid the delays in implementation which have been experienced by some organizations in the past when donors have objected to proposals on environmental or sociological grounds, usually because insufficient information has been available.

(9) A recurring theme in past reports has been the importance of the choice of the executive head of the organization in ensuring its efficiency and effectiveness. Certainly, the history of the existing organizations has reflected the personality and ability of their chief executives. It seems of paramount importance that the selection of the executive head be made on technical rather than political or other grounds. The performance of the executive head should be evaluated by the Council of Ministers in relation to the implementation of the action programme. They should be required to report to the meeting of Heads of State on this aspect at regular intervals.

(10) In the case of recent initiatives taken with a view to joint development of the resources of the Nile Basin and the Congo/Zaire Basin, either as a whole or in part, the secretariat seeks the indorsement of these initiatives by the Conference of Ministers. In both cases, the strategy will be development-orientated and will not seek to prejudice the right of any sovereign State to develop its own resources. Consultative mechanisms do not exist for the two largest basins on the continent and the Conference of Ministers may wish to discuss the creation of such, in the spirit of the African Convention on the Conservation of Nature and Natural Resources.6/

(11) In the case of the Congo/Zaire Basin which extends beyond the boundaries of the two economic integration entities, the PTA and ECCAS, member States may wish to consider the establishment of an independent commission which could deal equally with other intergovernmental organizations. The secretariat of ECA stands ready to assist with the creation of such, if and when requested to do so.

88. At this critical time in the history of Africa, the strengthening of international river and lake basin organizations can do much towards integrated economic development and collective self-reliance. The Lagos Plan of Action calls for the joint river basin organizations to promote intergovernmental co-operation in the development of shared water resources. At the beginning of the UNDP Fourth Cycle Regional Programme, it is to be hoped that continued

support will be forthcoming from UNDP to the river and lake basin organizations, bearing in mind their historic role in helping to create the existing organizations and the vital catalytic nature of their assistance in relation to the international donor community.

89. The secretariat of the Economic Commission for Africa fully supports the concept of using international river and lake basins as a vehicle for long-term socio-economic recovery. It looks forward to fruitful co-operation with member States and with the United Nations system in accelerating economic achievement through the joint development of water resources.

Notes

1/ The African Priority Programme for Economic Recovery 1986-1990 was presented to the General Assembly at the Thirteenth Special Session in June 1986. It was subsequently adopted within the United Nations Programme of Action for African Economic Recovery and Development 1986-1990 by its resolution S-13/2. (see - A/S - 13/15, 4 June 1986)

2/ G. O. Clapp, The TVA - an approach to the development of a region, (University of Chicago Press, Chicago, Illinois, USA. 1955).

3/ Secretariat Committee for Coordination of Investigations of the Lower Mekong Basin, "Report of the UNDP workshop for Nile Basin Countries, 20-27 January 1966, Bangkok, Thailand".

4/ A. L. Akiwumi, "Critical legal and administrative problems in the implementation of international basin arrangements in Africa", Second International Conference on Water Law and Administration, Casacas, Veneguela, 8-14 February 1976.

5/ United Nations Economic Commission for Africa, "Draft report of the joint ECA/UNDP mission to the river and lake basin organizations", February 1987. It contains a review of the status of the river and lake basin organizations which received UNDP assistance during the Third Cycle Regional Programme for Africa and proposals for the Fourth Cycle.

6/ African Convention on the Conservation of Nature and Natural Resources. Algiers, 15 September 1968. Article v - water, paragraph 2, states "Where surface or underground water resources are shared by two or more of the contracting States, the latter shall act in consultation, and if the need arises, set up inter-State commissions to study and resolve problems arising from the joint use of these resources, and for the joint development and conservation thereof."